DABNEY (W.C.)

AN OUTBREAK OF TYPHOID FEVER PRESENTING UNUSUAL FEATURES.

BY

WM. C. DABNEY, M.D.,

PROFESSOR OF THE PRACTICE OF MEDICINE IN THE UNIVERSITY OF VIRGINIA.

SURGEON GEN'L'S OFFICE
4991
LIBRARY

FROM

THE MEDICAL NEWS,

December 2, 1893.

[Reprinted from THE MEDICAL NEWS, December 2, 1893.]

AN OUTBREAK OF TYPHOID FEVER PRESENTING UNUSUAL FEATURES.[1]

BY WM. C. DABNEY, M.D.,
PROFESSOR OF THE PRACTICE OF MEDICINE IN THE UNIVERSITY OF VIRGINIA.

THE atypical forms of typhoid fever during the past few years have received much attention, and doubt has frequently been expressed whether atypical cases should be considered typhoid at all. A singularly favorable opportunity for studying cases of this character was furnished by an outbreak at the University of Virginia in the winter and spring of the present year (1893), and I propose to give a brief account of the outbreak in this paper.

In order to understand the origin of these cases it will be necessary to state briefly the arrangement of the lodging-rooms and eating-rooms at the institution.

The buildings of the University used as dormitories by the students are scattered over a space of ten or twelve acres, and there are four hotels, or "mess-halls," at which the students get their meals. A student can select his own boarding-house, so that each hotel has "table boarders" from all parts of the University grounds.

[1] Read before the Section on General Medicine of the Pan-American Medical Congress, September 6, 1893.

SURGEON GEN'L'S OFFICE
499.
LIBRARY

At the time of the outbreak—on February 17th—there were about 530 students at the University. Of this number about 350 roomed in the University buildings and took their meals in the University hotels.

There had been no typhoid fever at the institution for many months, nor were there any cases in the vicinity except one, of which I shall speak later.

On the 19th of February I was consulted at my office by Mr. D. D. H., a law student, who complained of loss of appetite, debility, and headache; his temperature was between 101° and 102°. Influenza was prevailing at the time, and I thought it probable that he was suffering with an attack of that disease, but a few days later he sent for me, and I found him with a well-marked attack of typhoid fever, which pursued a mild but typical course and ended in recovery.

A few days later I saw Mr. K., an academic student, who had severe headache, a temperature of 104°, aching in his limbs, and constipation; he had been sick only twenty-four hours; he was given salophen in six-grain doses every four hours, and the next day he went to his home in a neighboring city, where, as I was informed, he had a mild attack of typhoid fever.

These two young men lived in different parts of the University, but took their meals at the same boarding-house and sat at adjacent tables.

Perhaps before going further I should mention that the water-supply of the University is perfect in all respects, and the system of sewerage is excellent.

Just after the occurrence of the second suspicious

case I found that there was a negro man—a waiter —ill with typhoid fever in the basement of the hotel where these young men got their meals. On further inquiry I found he had been ill for about four weeks, and that another waiter who lived outside of the University grounds also had the disease. I did not see either of these cases, but was informed by the physician who attended them that they were typical cases of typhoid, one being quite severe in character.

Between this time and the 1st of April there were ten additional cases, making fourteen in all, and these patients lived in different parts of the University grounds, some being a quarter of a mile apart, *but all took their meals at the same hotel.*

Immediately after the occurrence of the second case and the discovery of the ill man in the basement of the boarding-house, the dining-room was closed and a thorough inspection of the building and premises was made by the health committee, consisting of three physicians and two engineers. Nothing was found about the house to account for the sickness, and an examination was then made of the milk-supply. It was found that a part of the milk-supply of this boarding-house came from the dairy of the keeper of the house. An inspection showed that the dairy was situated some distance from the University and on the banks of a creek, into which one of the main University sewers opened and at a point *above* the dairy ; it was further found by questioning the milkman that he got water from a point about twenty yards below the opening of the sewer, to wash the cows' udders before milking.

Besides this there had been a case of typhoid fever on this creek a mile above the dairy during the previous autumn, and the discharges from this patient —an ignorant negro—were thrown upon the ground without disinfection.

Before proceeding to consider the peculiar features of some of these cases, I wish to emphasize certain points that I have already mentioned :

1. There had been no typhoid fever in or around the University for several months, so far as I could learn, except one case in the vicinity, from which infection was practically impossible.

2. Between the middle of January and the 1st of April there occurred fourteen cases of continued fever among persons living or employed in the University grounds.

3. The persons who had this continued fever had rooms, in many cases, widely separated from each other, but all took their meals at the same hotel.

4. The water-supply of this hotel was the same as that of the other hotels and of the other parts of the University, and the sanitary condition of the building was good.

5. A part of the milk-supply was obtained from cows whose udders had been washed with water contaminated by sewage, and probably infected with typhoid-fever germs. It was in evidence also that at least five of the fourteen persons used milk at every meal. Probably there were others who did so, but I could only get definite information as to five.

Of the fourteen cases of this continued fever, ten were under my professional care and four under the care of other physicians, though I saw one of these

four cases at the commencement of the attack, and another near convalescence; several of my cases were seen also by my colleagues, Drs. Towles and Barringer, of the University of Virginia. Of the fourteen cases one was in a child, twelve years old—the daughter of the hotel-keeper; the others were in young men between the ages of 18 and 25 years.

Of the ten cases under my immediate care there were but three that pursued anything like the typical typhoid fever course. The first patient, Mr. D. D. H., was taken sick on February 17th, and his evening temperature was normal for the first time on March 5th; his temperature during this time ranged between 101° and 103°. The eruption in this case was well marked; the bowels usually moved spontaneously, but there was at no time any diarrhea. The only complication was an inability to pass urine, which for a week necessitated the use of the catheter.

Mr. G. was taken sick on March 4th with nausea and vomiting. His temperature ranged from 101° to 105° till March 25th, when he had a profuse hemorrhage from the bowels, with extreme prostration; the hemorrhages recurred at intervals until the 30th; there were no more hemorrhages after that time, but the stools were liquid, very offensive and passed involuntarily. On April 5th, the morning temperature was 101° and the evening temperature 103°, and by the 10th the patient was free from fever, but there was still some delirium. In two or three days, however, this passed away, and he seemed to be progressing very favorably for a week, when he was suddenly taken with violent convulsions, which recurred in rapid succession till his death, twelve hours later. No autopsy could be obtained.

There was but one other fairly well-marked case of typhoid fever among my ten cases. Mr. W. was taken sick on March 14th, but I did not see him till the 19th; his temperature then was 104.5°; his pulse was rapid, and his skin wet with sweat; he had severe headache, but there was no other disturbance of any kind. His evening temperature did not fall to the normal for four weeks, and ranged during the attack between 103° and 99°. A peculiarity about this case was that the temperature was higher during the first week than at any subsequent time. His bowels were constipated throughout and had to be moved by enemata. There was no eruption in this case, nor was there any tympanites, and though I have placed it in the list of well-marked cases, it was far from typical.

The seven remaining cases presented more or less atypical features, and I shall consider the different symptoms in order, to show their atypical course:

1. The ONSET was gradual in six cases, and sudden in one, commencing in this latter with a chill.

2. The DURATION was six days in one case, eleven in another, fifteen days in a third, eighteen days in a fourth, and over four weeks in the remaining cases.

3. The TEMPERATURE in five cases was higher during the first three days than at any subsequent time; the evening temperature on the day that I was called—the first or second day of sickness—being 103.7°, 102.8°, 102°, 101.8°, and 102.6° in the respective cases. One of these cases lasted over four weeks. In the remaining cases the temperature was very variable and the attack in each lasted over four weeks. For example, Mr. A. C. I., a medical student, had a temperature of 102° on

the morning of April 1st, 103.4° in the evening ; on April 3d, A.M. 100.6°, P.M. 103.4 ; April 9th, A.M. 99.6°, P.M. 103.5° ; these striking variations were entirely irrespective of treatment and were marked throughout the whole attack ; this was the only case except the fatal one already mentioned, in which there was diarrhea.

The following case presents somewhat similar variations of temperature : Mr. D. P. was taken sick on

March	26.	Temperature,	A.M. 100.5°,	P.M.	103°
April	1,	"	" 100.6°,	"	103.2°
"	3,	"	" 100.2°,	"	101.6°
"	9,	"	" 100.6°,	"	99.1°
"	11,	"	" 98.2°,	"	99.4°
"	15,	"	" 99°,	"	99.9°
"	17,	"	" 99°,	"	102°

Neither of these patients had ever had malaria in any form, nor did they live in malarial districts, one being from Highland County, Va., the other from Winchester, Kentucky.

4. The PULSE presented no features of especial interest ; it was rarely over 100, except in two cases —the one in which there was hemorrhage from the bowels, and in another, that of Mr. D. P., which ran a mild but tedious course.

5. The DIGESTIVE SYMPTOMS. There was loss of appetite in all cases after the first week, but during the first week two of the patients complained of being very hungry. Nausea and vomiting were present for a short time in two or three of the cases, but these symptoms were not marked. Diarrhea occurred in only two cases—that of Mr. G., in which there was hemorrhage from the bowels, and that of Mr. A. C. I.; in both it was very obstinate and

troublesome. In all the other cases constipation was a marked symptom. Iliac tenderness was present in five cases, and tympanites in two.

6. The ERUPTION was present in only two of the ten cases under my care.

7. The URINARY SYMPTOMS were not marked. In one case there was retention of urine, requiring the use of the catheter. Ehrlich's test (for diagnostic purposes) was not employed in any of the cases, as previous experience had satisfied me that it was of little value.

8. WEAKNESS, emaciation, and anemia were marked symptoms in the later stages of all of the cases.

I have thought it well to put the history of this outbreak of fever on record for the following reasons:

1. It furnished a singularly favorable opportunity for studying an unusual source of infection.

2. In an outbreak—of which the cause could be determined with reasonable certainty—occurring at a time when no form of continued fever was prevailing in the community, we find a number of persons infected from the same source, some of whom presented the typical features of typhoid fever, while others had a fever which would never have been classed with typhoid but for the surrounding circumstances.

It is of course conceivable that the cases that seem to me to be atypical typhoid fever were really of a different character, but in view of the facts that all originated from the same source and all grades of severity were observed, such a conclusion seems to me scarcely tenable.

The Medical News.

Established in 1843.

A WEEKLY MEDICAL NEWSPAPER.

Subscription, $4.00 per Annum.

The American Journal

OF THE

Medical Sciences.

Established in 1820.

A MONTHLY MEDICAL MAGAZINE.

Subscription, $4.00 per Annum.

COMMUTATION RATE, $7.50 PER ANNUM.

LEA BROTHERS & CO.

PHILADELPHIA.